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IBM CORPORATION, INTELLECTUAL PROPERTY LAW
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3605 HIGHWAY 52 NORTH
ROCHESTER, MN 55901-7829

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| EXAMINER |
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FRANCIS, MARK P

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2193

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10/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/090,341

Applicant(s)

BATES ET AL.

Examiner

Mark P. Francis

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6, 8-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the Appeal Brief filed June 20, 2007.
2. The Final rejection dated October 20, 2006 has been withdrawn and a new non-final rejection appears below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2,4-6,9-12, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wimble(U.S. Pat. 5,812,850) in view of Knouse (U.S. PGPUB 2007/0044144) and further in view of Warmink.(U.S. Pat. 6,611,924)

Regarding claims 1 and 9,

Wimble discloses a method of debugging executable code configured to access associated data in a data repository(Col 6:33-47, "...Debugging information is really a database of information....", Col 8:16-27,"...the Debugger 48, in the same database..."), comprising:

Art Unit: 2193.

Initiating a debugging session for the executable code, and during the debugging session;(See Abstract, lines 108, "provides an interactive...")(Col 3:35-38, "the debugging session...")

Monitoring step-by-step execution of the executable code;(Col 9-11:1-67, "...The Instruction Map 62 provides detailed knowledge of how each executable machine instruction...")

determining whether the monitored executable code has accessed the associated data in the data repository(Col 12:47-67, "...a component in the Debugger Database...") but does not disclose if so, determining whether to display the associated data on the basis of whether the associated data is restricted data; wherein determining whether to display the associated data comprises referencing predefined access restriction rules defining at least one rule preventing at least a portion of the associated data from being displayed to unauthorized users; and

upon determining not to display the associated data on the basis of the referenced predefined access restriction rules, outputting masking characters on an output screen indicative of the associated data without revealing a value of the associated data, whereby selected data from the data repository is concealed from a user debugging the executable code. but does not disclose determining whether to display the associated data on the basis of whether the associated data is restricted data; wherein determining whether to display the associated data comprises referencing predefined access restriction rules defining at least one rule preventing at least a portion of the associated data from being displayed to unauthorized users

Art Unit: 2193

Knouse discloses determining whether to display the associated data on the basis of whether the associated data is restricted data; (Col 5:0100, "...performs the authentication by accessing attributes of the user's profile and the resource's authentication...") wherein determining whether to display the associated data comprises referencing predefined access restriction rules defining at least one rule preventing at least a portion of the associated data from being displayed to unauthorized users (Col 5:0100, "...for the appropriate authorization criteria...") in an analogous system for the purpose of providing security for resources across one or more web servers. (Knouse: Col 4:0085)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to determine whether to display the associated data on the basis of the data being restricted to Wimble's invention.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide security for resources across one or more web servers. (Knouse: Col 4:0085)

And

Neither Wimble nor Knouse disclose, upon determining not to display the associated data on the basis of the referenced predefined access restriction rules, outputting

Art Unit: 2193

characters on an output screen indicative of the associated data without revealing a value of the associated data, whereby selected data from the data repository is concealed from a user debugging the executable code

Warmink discloses upon determining not to display the associated data on the basis of the referenced predefined access restriction rules, outputting masking(Col 2:35-67, "...developer-selected masks...") characters on an output screen indicative of the associated data without revealing a value of the associated data, whereby selected data from the data repository is concealed from a user debugging the executable code(Col 2:35-67, "...based on some specified rules of filtering...") in an analogous system for the purpose of providing debug output strings, each debug output statement comprising a fixed-size text string that is replaced with a unique text string number to provide stripped source code.(Warmink:Col 3:43-51)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to include a function for determining whether to display data based upon predefined access restriction rules to Wimble's invention.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide debug output strings, each debug output statement comprising a fixed-size text string that is replaced with a unique text string number to provide stripped source code.(Warmink:Col 3:43-51)

Regarding claim 16,

Wimble discloses a computer-readable medium containing a debug program which, when executed, performs an operation of debugging code configured to access associated data in a repository(See Above rejection of claims 1 and 16), the debug program comprising:

A debugger user interface; (e.g. See Fig. 1, element 22 and Col 6:48-65, "...an interface between Information Providers and Information Consumers...")

A debug engine configured to selectively pass data to the debugger user interface(Col 26:21-25, "...a debugger engine..." and See Fig. 3, element 54 and related text) but does not disclose according to predefined access restriction rules defining at least one rule prohibiting at least a portion of the associated data from being displayed to a user operating the debug program,

Knouse discloses according to predefined access restriction rules(Col 5:0100, "...performs the authentication by accessing attributes of the user's profile and the resource's authentication...") defining at least one rule prohibiting at least a portion of the associated data from being displayed to a user operating the debug program, (Col 5:0100, "...for the appropriate authorization criteria...")in an analogous system for the

Art Unit: 2193

purpose of providing security for resources across one or more web servers.(Knouse:Col 4:0085)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to determine whether to display the associated data on the basis of the data being restricted to Wimble's invention.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide security for resources across one or more web servers.(Knouse:Col 4:0085)

Neither Wimble nor Knose disclose whereby selected data from the data repository is concealed from the user debugging the executable code.

Warmink discloses whereby selected data from the data repository is concealed from the user debugging the executable code Col 2:35-67, "...developer-selected masks...") in an analogous system for the purpose of providing debug output strings, each debug output statement comprising a fixed-size text string that is replaced with a unique text string number to provide stripped source code.(Warmink:Col 3:43-51)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to include a function for determining whether to display data based upon predefined access restriction rules to Wimble's invention.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to providing debug output strings, each debug output statement comprising a fixed-size text string that is replaced with a unique text string number to provide stripped source code.(Warmink:Col 3:43-51)

Dependent claims

Regarding claims 2 and 10,

Wimble discloses wherein determining whether to display the associated data comprises determining whether the associated data can be provided to a debugger user interface.(Col 6:33-47, "...It is not often that the information...", Col 7: 12-38, "...the information provider's interface to the symbolic information...", See Fig. 3 elements 60(interface), 61(data), 63(data))

Regarding claims 4 and 12,

wherein determining whether the associated data can be displayed comprises referencing a restricted data table(Wimble: Col 28:3-5, "said information database") created in response to reading the associated data from the repository and according to

Art Unit: 2193

the predefined access restriction rules. (Warmink: Col 2:35-67, "...provides a filterable debug output...", Col 3:30-40, "...to further prevent unauthorized users...")

Regarding claim 5,

Wimble discloses wherein determining whether to display the associated data is performed by a debugging program.(Col 8:16-36, "...the Debugger to control the debugged program...")

Regarding claim 6,

determining whether to display the associated data is performed by a debugging program.(Wimble: Col 8:16-36, "...the Debugger to control the debugged program...") implementing the predefined access restriction rules. (Warmink:Col 2:35-67, "...provides a filterable debug output...", Col 3:30-40, "...to further prevent unauthorized users...")

Regarding claims 11 and 17,

The debug engine is configured to: Determine that the associated data cannot be displayed during the debugging session;(Wimble: Col 19: 11-15, "...the debugger couldn't determine...") and conceal the display of the associated data by displaying text characters on an output screen indicative of the associated data without revealing a value of the associated data. (Warmink:Col 6:50-67, "...source code is replaced with a unique number, such as ENUM...")

Art Unit: 2193

Regarding claim 15,

The executable code accesses the associated data comprising a record and wherein determining whether the associated data can be displayed comprises:

Referencing the predefined access restriction rules defining at least one rule preventing at least one field value from being displayed;(Warmink:Col 6:50-67, "...source code is replaced with a unique number, such as ENUM...")

and

Determining whether the record contains the at least one field value.(Warmink:Col 6:50-67, "...source code is replaced with a unique number, such as ENUM...")

Regarding claim 19,

The at least one rule defines a value and an associated value, wherein if the associated value has been displayed the debug engine will not provide the value to the debugger user interface for display. (Warmink:Col 6:50-67, "...source code is replaced with a unique number, such as ENUM...")

Regarding claim 18,

Wherein the debug engine is configured to selectively pass data to the debugger user interface by referencing a restricted data table created in response to reading the associated data from the repository and according to the predefined access restriction rules.(See above rejection of claims 4 and 12)

5. Claims 8, 14, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wimble, Knouse in view of Warmink and further in view of Kolawa.(U.S. Pat 6,085,029)

Regarding claims 8 and 14,

Neither Wimble, Knouse nor Warmink disclose determining whether to display the associated data comprises referencing a parse expression defining a data format and an output expression defining a restricted portion of the parse expression.

Kolawa discloses determining whether to display the associated data comprises referencing a parse expression(Col 5:46-50, "a parsing...") defining a data format and an output expression defining a restricted portion of the parse expression(Col 7:28-35, "...form of debug output...") in an analogous system for the purpose to generate code for the target program which not only functions as was originally intended, but also contains calls to instrumentation procedures which provide automatic error detection of dynamic program errors as well as an ability to automatically generate test cases.
(Kolawa: Col 7: 36-41)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to reference a parse expression for determining data to be displayed during a debugging session.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to develop a method of automatically instrumenting a computer program for dynamic debugging as an integral part of the program development cycle and without introducing an extra stage in the program development cycle. (Col 2: 27-33, "...an extra stage...")

Regarding claim 20

Neither Wimble nor Warmink disclose that the at least one rule defines a parse expression defining a data format and an output expression defining a restricted portion of the parse expression, whereby all values having restricted portion will not be provided to the debugger user interface for display.

Kolawa discloses that the at least one rule defines a parse expression defining a data format and an output expression (Col 7:28-35, "...form of debug output...") defining a restricted portion of the parse expression (Col 15:49, "parse tree..."), whereby all values having restricted portion will not be provided to the debugger user interface for display (Col 16:53-61, "...interface is inserted...") in an analogous debugging program for the purpose to generate code for the target program which not only functions as was originally intended, but also contains calls to instrumentation procedures which provide automatic error detection of dynamic program errors as well as an ability to automatically generate test cases. (Kolawa: Col 7: 36-41)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to reference a parse expression, whereby all values that contain restricted portion will not be provided for determining data to be displayed during a debugging session.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to develop a method of automatically instrumenting a computer program for dynamic debugging as an integral part of the program development cycle and without introducing an extra stage in the program development cycle. (Col 2: 27-33, "...an extra stage...")

Response to Arguments

6. Applicant's arguments filed on April 20, 2007 have been fully considered but they are not moot in view of the new grounds of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark P. Francis whose telephone number is (571)272-7956. The examiner can normally be reached on Mon-Fri 8:00-4:30.

Art Unit: 2193


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T. An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark P. Francis

Patent Examiner

Art Unit 2193


MENG-AI T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100